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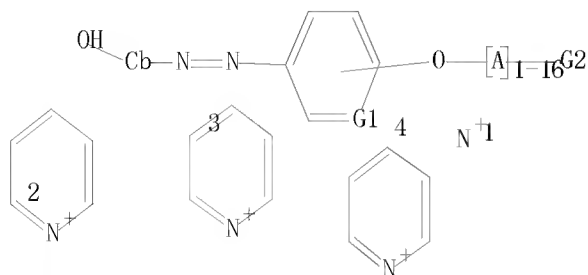
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 L3 0 S L1 OR L2  
 L4 55 S L1 OR L2 FULL

=> d que l4 stat

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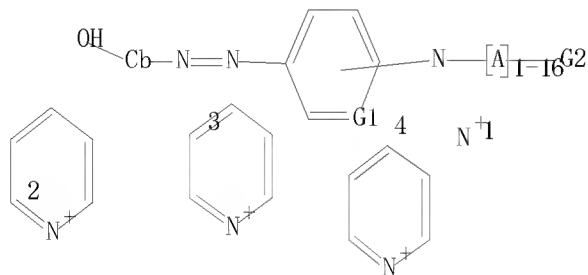


G1 N, OH

G2 [01], [02], [03], [04]

Structure attributes must be viewed using STN Express query preparation.

L2 STR



G1 N, OH

G2 [01], [02], [03], [04]

Structure attributes must be viewed using STN Express query preparation.

L4 55 SEA FILE=REGISTRY SSS FUL L1 OR L2

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55 ANSWERS

=> s l4 and caplus/lc

57868715 CAPLUS/LC

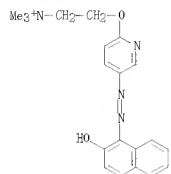
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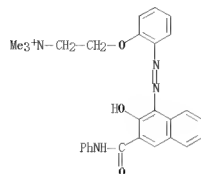
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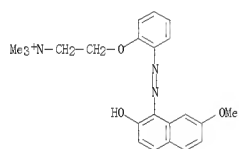
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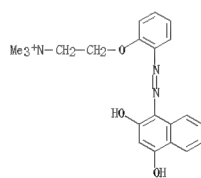
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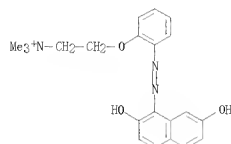
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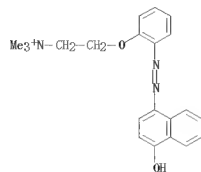
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 CI COM  
 SR CA



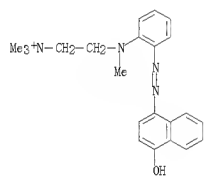
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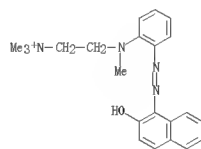
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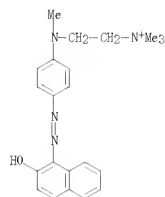
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 CI COM  
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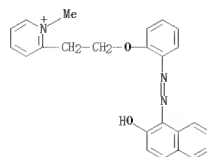
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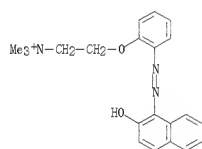
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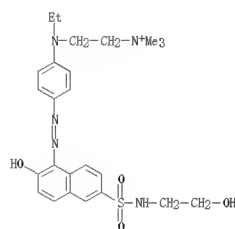
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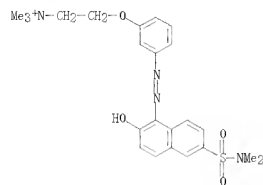
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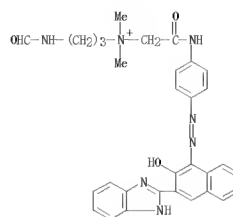
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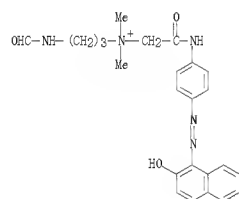
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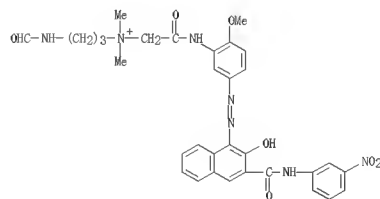
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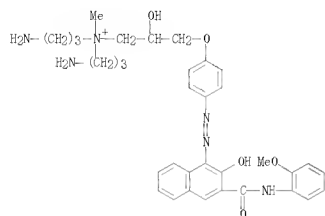
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 MF C24 E28 N5 06  
 CI COM  
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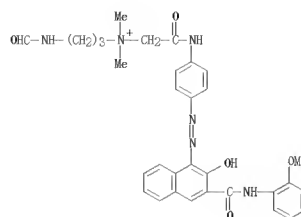
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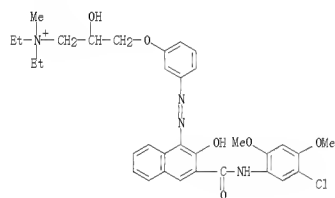
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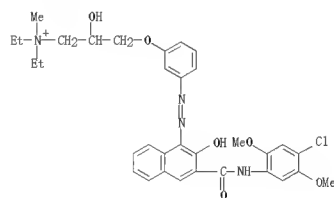
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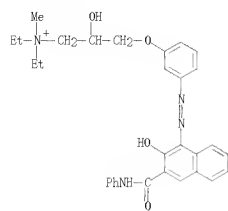
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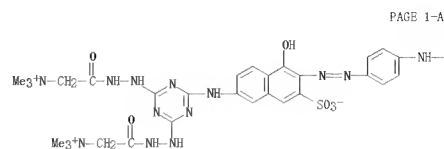
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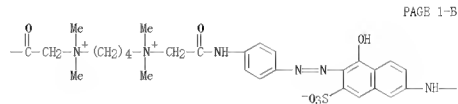
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 MF C31 H35 N4 O4  
 CI COM



L6 ANSWER 22 OF 26 REGISTRY COPYRIGHT 2008 ACS on STN  
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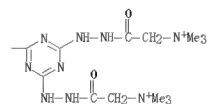


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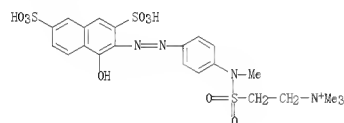


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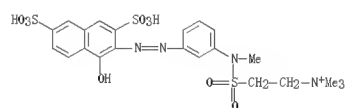
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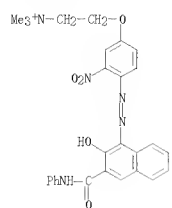
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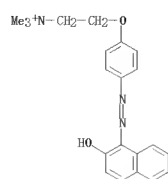
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L6 ANSWER 25 OF 26 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 47799-87-1 REGISTRY  
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 MF C25 H28 N5 O5  
 CI COM



L6 ANSWER 26 OF 26 REGISTRY COPYRIGHT 2008 ACS on STN  
 RN 47488-90-4 REGISTRY  
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FILE COVERS 1907 - 11 Aug 2008 VOL 149 ISS 7  
FILE LAST UPDATED: 10 Aug 2008 (20080810/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

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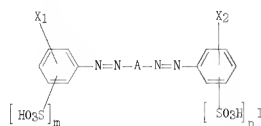
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L7 19 L4

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L7 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007:1012907 CAPLUS  
 DOCUMENT NUMBER: 147:408204  
 TITLE: Method for preparing diazo active dye and its composition  
 INVENTOR(S): Ruan, Weixiang; Gong, Guoliang; Ou, Qi  
 PATENT ASSIGNEE(S): Zhejiang Longsheng Group Co., Ltd., Peop. Rep. China;  
 Shanghai Colva Dyestuff Industrial Corporation  
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 25pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101029184	A	20070905	CN 2006-10049642	20060228
PRIORITY APPLN. INFO.:			CN 2006-10049642	20060228
OTHER SOURCE(S):		MARPAT 147:408204		
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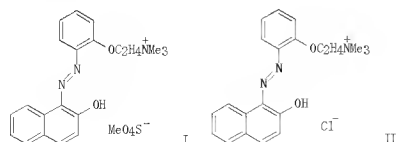


ABSTRACT:  
 The title diazo active dye has a structure shown in formula I, while A is a substituted benzene ring or naphthalene ring. The substituent is one or more of OH, SO<sub>3</sub>H and NHR<sub>6</sub>. The active dye can be used for dyeing cellulose fibers alone or its composition is used for dyeing fibers containing N or hydroxyl into black. The active dye has the advantages of bright color, and good resistances against water, fiction and sweat stain.

IT 950919-08-1P  
 RL: IMP (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (Preparing diazo active dye and its composition)  
 RN 950919-08-1 CAPLUS  
 CN Ethanaminium, 2-[[[4-[2-[2-amino-5-hydroxy-7-sulfo-6-[2-[4-[[[(trimethylammonio)methyl)sulfonyl]amino]phenyl]diazenyl]-1-naphthalenyl]diazenyl]-3-sulfonyl]amino]-N,N,N-trimethyl- (CA INDEX NAME)

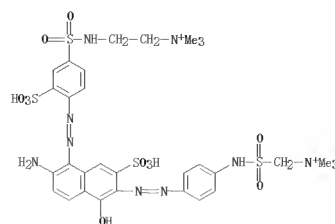
L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:1004830 CAPLUS  
 DOCUMENT NUMBER: 143:287907  
 TITLE: Cationic naphthylidiazao dyes and colorants for keratin fibers containing said compounds  
 INVENTOR(S): Goettel, Otto; Hayoz, Andre; Braun, Hans-Juergen  
 PATENT ASSIGNEE(S): Wella Aktiengesellschaft, Germany  
 SOURCE: PCT Int. Appl., 48 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200608562	A1	20060915	WO 2004-EP14189	20041213
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, NG, SN, TD, TG				
DE 102004010999	A1	20050922	DE 2004-102004010999	20040306
EP 1740657	A1	20070110	EP 2004-803818	20041213
EP 1740657	B1	20070912		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
BR 2004018613	A	20070502	BR 2004-18613	20041213
AT 373061	7	20070915	AT 2004-803818	20041213
JP 2007527457	7	20070927	JP 2007-501128	20041213
ES 2294565	T3	20080401	ES 2004-803818	20041213
US 20080167453	A1	20080710	US 2006-584955	20060620
PRIORITY APPLN. INFO.:			DE 2004-102004010999A	20040306
OTHER SOURCE(S):		MARPAT 143:287907	WO 2004-EP14189	W 20041213
GRAPHIC IMAGE:				



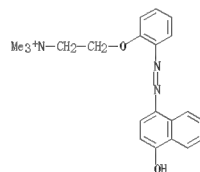
ABSTRACT:  
 Cationic naphthylidiazao dyes such as, an example I or II useful for non-oxidative dyeing keratin fibers, especially hair are prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling with 1- or 2-naphthols. Thus, I prepared by reduction of 34 g N,N,N-trimethyl-2-(2-nitrophenoxy)ethanaminium methylsulfate with H<sub>2</sub> (pressure 9 bar) in the presence of Pd/C catalyst followed by a standard diazotization in

L7 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 water with NaNO<sub>2</sub> and sulfamic acid and coupling with a soln. of 2-naphthol in 1-PrOH was used in a compn. for dyeing hair contg. 4.0 g of decyl glucoside, 5.0 g of ethanol and 0.0025 mol of this dye in 100 g of water at pH 7.

IT 864465-12-3P  
 RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (Cationic naphthylidiazao dyes useful for non-oxidative dyeing keratin fibers prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling)  
 RN 864465-12-3 CAPLUS  
 CN Ethanaminium, 2-[2-[2-(4-hydroxy-1-naphthalenyl)diazenyl]phenoxy]-N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)

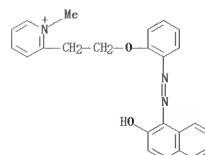


● Cl<sup>-</sup>

IT 864465-14-5P 864465-15-6P  
 RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dark red dye; cationic naphthylidiazao dyes useful for non-oxidative dyeing keratin fibers prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling)  
 RN 864465-14-5 CAPLUS  
 CN Pyridinium, 2-[2-[2-(2-hydroxy-1-naphthalenyl)diazenyl]phenoxy]ethyl]-1-methyl-, methyl sulfate (1:1) (CA INDEX NAME)

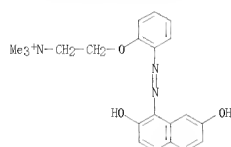
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CRN 864465-13-4  
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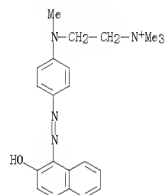


L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CM 2

CRN 21228-90-0  
CMF C H3 O4 SMe-O-SO<sub>3</sub><sup>-</sup>RN 864465-15-6 CAPLUS  
CN Ethanaminium, 2-[2-[2-(2,7-dihydroxy-1-naphthalenyl)diazenyl]phenoxy]-  
N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)● Cl<sup>-</sup>IT 864465-17-8P 864465-26-9P  
RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(orange dye; cationic naphthylidazo dyes useful for non-oxidative dyeing keratin fibers prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling)RN 864465-17-8 CAPLUS  
CN Ethanaminium, 2-[2-[2-(2,4-dihydroxy-1-naphthalenyl)diazenyl]phenoxy]-  
N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)

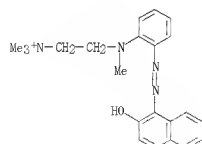
L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 21228-90-0  
CMF C H3 O4 SMe-O-SO<sub>3</sub><sup>-</sup>RN 864465-23-6 CAPLUS  
CN Ethanaminium, 2-[2-[2-(2-hydroxy-1-naphthalenyl)diazenyl]phenyl]methylami-  
no]-N,N,N-trimethyl-, methyl sulfate (1:1) (CA INDEX NAME)

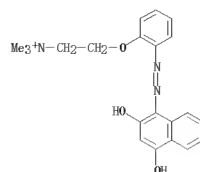
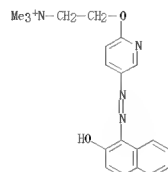
CM 1

CRN 864465-22-5  
CMF C22 H27 N4 O

CM 2

CRN 21228-90-0  
CMF C H3 O4 SMe-O-SO<sub>3</sub><sup>-</sup>RN 864465-25-8 CAPLUS  
CN Ethanaminium, 2-[2-[2-(4-hydroxy-1-naphthalenyl)diazenyl]phenyl]methylami-  
no]-N,N,N-trimethyl-, methyl sulfate (1:1) (CA INDEX NAME)

L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

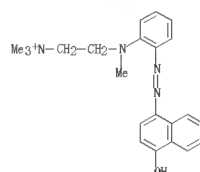
● Cl<sup>-</sup>RN 864465-26-9 CAPLUS  
CN Ethanaminium, 2-[2-[2-(2-hydroxy-1-naphthalenyl)diazenyl]-2-  
pyridinyl]oxy]-N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)● Cl<sup>-</sup>IT 864465-21-4P 864465-23-6P 864465-25-8P  
RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(red brown dye; cationic naphthylidazo dyes useful for non-oxidative dyeing keratin fibers prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling)RN 864465-21-4 CAPLUS  
CN Ethanaminium, 2-[4-[2-(2-hydroxy-1-naphthalenyl)diazenyl]phenyl]methylami-  
no]-N,N,N-trimethyl-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 864465-20-3  
CMF C22 H27 N4 O

L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

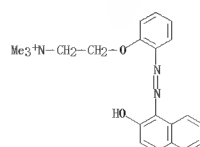
CM 1

CRN 864465-24-7  
CMF C22 H27 N4 O

CM 2

CRN 21228-90-0  
CMF C H3 O4 SMe-O-SO<sub>3</sub><sup>-</sup>IT 864465-11-2P 864465-18-9P  
RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(red dye; cationic naphthylidazo dyes useful for non-oxidative dyeing keratin fibers prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling)RN 864465-11-2 CAPLUS  
CN Ethanaminium, 2-[2-[2-(2-hydroxy-1-naphthalenyl)diazenyl]phenoxy]-N,N,N-  
trimethyl-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 864465-10-1  
CMF C21 H24 N3 O2

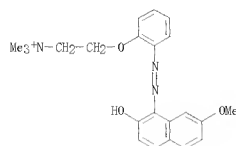
CM 2

CRN 21228-90-0

L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
CMF C H3 04 S

Me-O-SO<sub>3</sub><sup>-</sup>

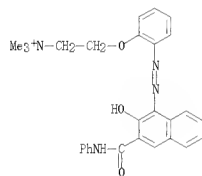
RN 864465-18-9 CAPLUS  
CN Ethanaminium, 2-[2-[2-(2-hydroxy-7-methoxy-1-naphthalenyl)diazonyl]phenoxy]-N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)



● C1<sup>-</sup>

IT 864465-19-0F  
RL: COS (Cosmetic use); IMF (Industrial manufacture); BIOL (Biological study); PREF (Preparation); USES (Uses)  
(red violet dye; cationic naphthylazo dyes useful for non-oxidative dyeing keratin fibers prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling)

RN 864465-19-0 CAPLUS  
CN Ethanaminium, 2-[2-[2-(2-hydroxy-3-[(phenylamino)carbonyl]-1-naphthalenyl)diazonyl]phenoxy]-N,N,N-trimethyl-, chloride (1:1) (CA INDEX NAME)



● C1<sup>-</sup>

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS

L7 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1984:53197 CAPLUS  
DOCUMENT NUMBER: 100:53197  
ORIGINAL REFERENCE NO.: 100:8187a,8140a  
TITLE: Polycationic azo dyes  
INVENTOR(S): Dore, Jacky; Pedrazzi, Reinhard  
PATENT ASSIGNEE(S): Sandoz-Patent-G.m.b.H., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 52 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

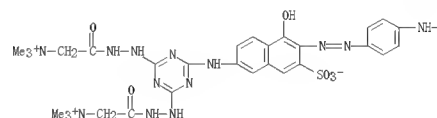
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3313965	A1	19831027	DE 1983-3313965	19830418
CH 663697	A5	19860115	CH 1983-2041	19830415
GB 2121814	A	19840104	GB 1983-19849	19830421
GB 2121814	B	19860608		
FR 2525620	A1	19831028	FR 1983-6682	19830422
FR 2525620	B1	19850610		
JP 58217557	A	19831217	JP 1983-70933	19830423
JP 59147053	A	19840823	JP 1983-86744	19830519
US 4670546	A	19870602	US 1984-625716	19840628
PRIORITY APPLN. INFO.:			DE 1982-3215361	A1 19820424
			DE 1983-3308969	A1 19830206
			US 1983-489136	A2 19830425

OTHER SOURCE(S): MARPAT 100:53197  
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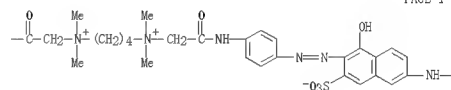
L7 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



PAGE 1-C

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

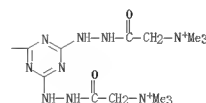
#### ABSTRACT:

Title dyes, including transition metal complexes, were prepared and used to dye paper, leather, textiles, and bast fibers in fast scarlet, red, orange, or blue shades. Typical dyes are 1. [88452-50-0], fast scarlet on paper, prepared by diazotization of p-H2NCOCH2NHCH2N+Me2(CH2)4N+Me2COHCOCH2NH2-p [88452-48-6] and coupling with the appropriate J acid derivative; and 11 [88452-51-1], similarly prepared and giving fast orange dyeings on paper.

IT 88452-50-0F  
RL: PREP (Preparation)  
(manufacture of, as scarlet dye for paper)  
RN 88452-50-0 CAPLUS  
CN 1,4-Butanediaminium, N,N'-bis[2-[[4-[[6-[[4,6-bis[2-[(trimethylammonio)acetyl]hydrazino]-1,3,5-triazin-2-yl]amino]-1-hydroxy-3-sulfo-2-naphthalenyl]azophenyl]amino-2-oxoethyl]-N,N,N',N'-tetramethyl-, bis(inner salt), tetraacetate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 88452-49-7  
CMF C70 H98 N28 O14 S2



CM 2

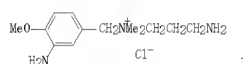
CRN 71-50-1  
CMF C2 H3 O2



L7 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1981:176692 CAPLUS  
 DOCUMENT NUMBER: 94:176692  
 ORIGINAL REFERENCE NO.: 94:28893a, 28896a  
 TITLE: N,N-Dialkyl-N-aminoalkyl-N-(amino or nitro)phenylalkyl- and N-methyl-N-[3-(amino or nitro)phenoxy-2-hydroxy-1-propyl]-N,N-bis(3-aminopropyl)quaternary ammonium salts  
 INVENTOR(S): Crounse, Nathan M.; Jefferies, Patrick J.  
 PATENT ASSIGNEE(S): Sterling Drug Inc., USA  
 SOURCE: U.S., 42 pp. Cont.-in-part of U.S. 4,146,558.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4206144	A	19800603	US 1978-963031	19781122
US 3839426	A	19741001	US 1970-51690	19700701
US 3784599	A	19740108	US 1971-201153	19711122
US 3935182	A	19760127	US 1973-332511	19730214
CA 940121	A2	19740115	CA 1973-163853	19730216
US 3996282	A	19761207	US 1974-486180	19740705
US 4103092	A	19780725	US 1975-595864	19750714
US 4046500	A	19770906	US 1976-672482	19760331
US 4146558	A	19790327	US 1977-839975	19771006
PRIORITY APPLN. INFO.:			US 1966-551868	A2 19660523
			US 1968-777894	A2 19681121
			US 1970-51673	A2 19700701
			US 1970-51690	A2 19700701
			US 1971-201153	A2 19711122
			US 1973-332511	A2 19730214
			US 1974-486180	A2 19740705
			US 1975-595864	A2 19750714
			US 1976-672482	A2 19760331
			US 1977-839975	A2 19771006
			CA 1969-65436	A3 19691021
			US 1970-51676	A2 19700701
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			US 1976-672428	A2 19760331

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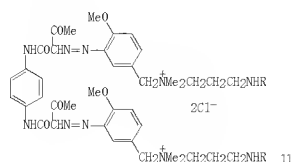
#### ABSTRACT:

Title compds. are prepared for use in intermediates in the synthesis of water-soluble yellow to red azo dyes allowing high bleedfastness and bleachability on paper. Thus, quaternization of Me2N(CH2)3NH2 (5922-69-0) with 3,4-OCH(MeO)C6H3CH2Cl (6378-19-4), reduction of the resultant nitro compound [40948-28-6], and hydrolysis of the formamide group with aqueous HCl gave the dihydrochloride [77263-05-9] of I. Numerous other title compds. were

L7 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1979:422413 CAPLUS  
 DOCUMENT NUMBER: 91:22413  
 ORIGINAL REFERENCE NO.: 91:3745a, 3748a  
 TITLE: Azo dyes from intermediate nitro- or aminobenzenes ring-substituted by a quaternized aminoalkyl or aminoalkoxy group  
 INVENTOR(S): Jefferies, Patrick J.; Crounse, Nathan N.  
 PATENT ASSIGNEE(S): Sterling Drug Inc., USA  
 SOURCE: U.S., 44 pp. Cont.-in-part of U.S. 4,065,500.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4146558	A	19790327	US 1977-839975	19771006
US 3709903	A	19750109	US 1970-51676	19700701
US 3839426	A	19741001	US 1970-51690	19700701
GB 1335837	A	19751017	GB 1971-29451	19710622
CA 940628	A1	19740122	CA 1971-116474	19710623
US 3784599	A	19740108	US 1971-201153	19711122
US 3935182	A	19760127	US 1973-332511	19730214
CA 940121	A2	19740115	CA 1973-163853	19730216
US 3996282	A	19761207	US 1974-486180	19740705
US 4103092	A	19780725	US 1975-595864	19750714
US 4065500	A	19771227	US 1976-672428	19760331
US 4206144	A	19800603	US 1978-963031	19781122
PRIORITY APPLN. INFO.:			US 1966-551868	A2 19660523
			US 1968-777894	A2 19681121
			US 1970-51676	A2 19700701
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			US 1974-486180	A2 19740705
			US 1975-595864	A2 19750714
			US 1976-672428	A2 19760331
			US 1966-531868	A2 19660304
			CA 1969-65436	A3 19691021
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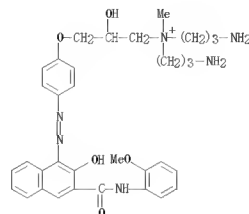


#### ABSTRACT:

A large number of aromatic mono- and disazo dyes were prepared from nitro- or aminobenzenes containing a quaternary ammonium or hydrazinium group attached to the

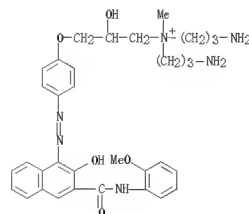
L7 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 similarly prep'd., and examples of their diazotization and coupling to form dyes are also described.

IT 66754-92-5P  
 RL: IMP (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (dye, manufacture of)  
 RN 66754-92-5 CAPLUS  
 CN 1-Propanaminium, N,N-bis(3-aminopropyl)-2-hydroxy-3-[4-[[2-hydroxy-3-[[[2-methoxyphenyl]amino]carbonyl]-1-naphthalenyl]azo]phenoxy]-N-methyl-, chloride (9C1) (CA INDEX NAME)



L7 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 benzene ring via a lower alkyl or alkoxy group; the quaternary ammonium groups were of the substituted (aminoalkyl)ammonio and [(acylamino)alkyl]ammonio type. Many of the dyes are useful for dyeing paper yellow, red, or orange shades, and show a low tendency to bleed and a high degree of color discharge when bleached with hypochlorite or Cl-. Thus, 3,4-H2N(MeO)C6H3CH2N+(Me2CH2CH2CH2NECHO)2 (I) [38901-96-8] was diazotized and coupled with p-CH4(NHCOCH2COMe)2 [24731-73-5] to give II (R = CHO) [38901-94-9], a water-sol. yellow dye which bled only slightly in the water- and soap-bleed tests on paper and also was easily bleached after being applied to paper. Its hydrolysis product, II' (R = H) [38901-95-0] showed essentially the same bleachability but had superior bleed resistance. The prepn. of I and many similar cationic intermediates is described.

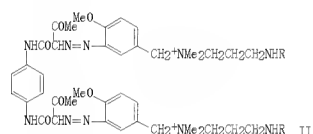
IT 66754-92-5P  
 RL: PREP (Preparation)  
 (manufacture of, for use as paper dye)  
 RN 66754-92-5 CAPLUS  
 CN 1-Propanaminium, N,N-bis(3-aminopropyl)-2-hydroxy-3-[4-[[2-hydroxy-3-[[[2-methoxyphenyl]amino]carbonyl]-1-naphthalenyl]azo]phenoxy]-N-methyl-, chloride (9C1) (CA INDEX NAME)



L7 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1979:105604 CAPLUS  
 DOCUMENT NUMBER: 90:105604  
 ORIGINAL REFERENCE NO.: 90:16687a,16690a  
 TITLE: Water-soluble quaternary ammonium nonheterocyclic azo dyes  
 INVENTOR(S): Jefferies, Patrick J.; Crounse, Nathan N.  
 PATENT ASSIGNEE(S): Sterling Drug Inc., USA  
 SOURCE: U.S., 83 pp. Cont.-in-part of U.S. 3,935,182.  
 ODDEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4103092	A	19750725	US 1975-595864	19750714
US 3709903	A	19720109	US 1970-51676	19700701
US 3839426	A	19741001	US 1970-51690	19700701
GB 1333857	A	19731017	GB 1971-29451	19710622
CA 940528	A1	19740122	CA 1971-116474	19710623
US 3784599	A	19740108	US 1971-201153	19711122
US 3935182	A	19760127	US 1973-322511	19730214
CA 940121	A2	19740115	CA 1973-163853	19730216
US 3996282	A	19761207	US 1974-486180	19740705
US 4065500	A	19771227	US 1976-672428	19760331
US 4146558	A	19790327	US 1977-839915	19771006
US 4306144	A	19500603	US 1978-963031	19781122
PRIORITY APPLN. INFO.:			US 1966-531868	A2 19660523
			US 1968-777884	A2 19681121
			US 1970-51676	A2 19700701
			US 1970-51690	A2 19700701
			US 1971-201153	A2 19711122
			US 1973-322511	A2 19730214
			US 1974-486180	A2 19740705
			US 1966-531868	A2 19660504
			CA 1969-65436	A3 19691021
			US 1970-51673	A2 19700701
			US 1975-595864	A2 19750714
			US 1976-672428	A2 19760331
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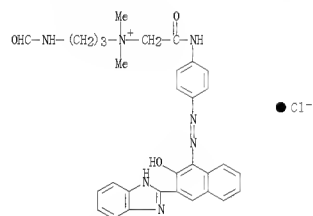
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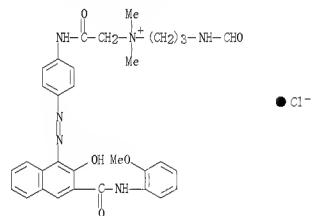
# ABSTRACT:

A large number of mono- and disazo dyes containing quaternary ammonium groups, e.g.

L7 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 40948-98-9 CAPLUS  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[4-[[2-hydroxy-3-[[2-methoxyphenyl]amino]carbonyl]-1-naphthalenyl]azo]phenyl]amino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

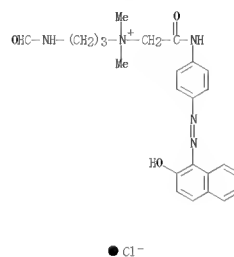


RN 66754-92-5 CAPLUS  
 CN 1-Propanaminium, N,N-bis(3-aminopropyl)-2-hydroxy-3-[4-[[2-hydroxy-3-[[2-methoxyphenyl]amino]carbonyl]-1-naphthalenyl]azo]phenoxy]-N-methyl-, chloride (9CI) (CA INDEX NAME)

L7 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 (aminoalkyl)ammonio, [(acylamino)alkyl]ammonio, and (ammonioalkyl)amino, were prepd. Many of these dyes showed good bleed resistance when used as paper dyes and were readily bleachable by hypochlorite. Thus, 3,4-H2N(OMe)OCH2CH2N(Me)2CH2CH2CH2CHO (I) [38901-93-6] was diazotized and coupled with p-CEH4(NHCOCH2COMe)2 [24731-73-5] to give II (R = CHO) [38901-94-9], a water-sol. yellow dye which bled only slightly in the water- and soap-bleed tests on paper and also was easily bleached after being applied to paper. Its hydrolysis product, II (R = H) [38901-95-0], showed essentially the same bleachability but had superior bleed resistance. The prepn. of II and many similar cationic arom. amino compds. is described.

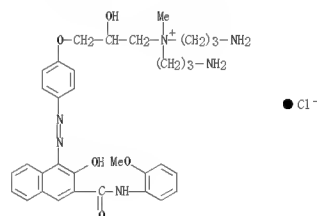
IT 40948-45-6P 40948-96-7P 40948-98-9P  
 66754-92-5P 66754-94-7P  
 RL: IMP (Industrial manufacture); PREP (Preparation)  
 (preparation of)

RN 40948-45-6 CAPLUS  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[4-[[2-hydroxy-1-naphthalenyl]azo]phenyl]amino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

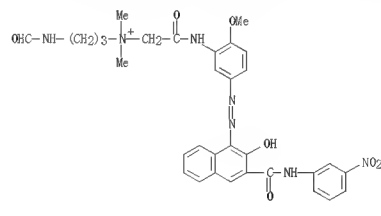


RN 40948-96-7 CAPLUS  
 CN 1-Propanaminium, N-[2-[[4-[[3-(1H-benzimidazol-2-yl)-2-hydroxy-1-naphthalenyl]azo]phenyl]amino]-2-oxoethyl]-3-(formylamino)-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

L7 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 66754-94-7 CAPLUS  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[5-[[2-hydroxy-3-[[3-nitrophenyl]amino]carbonyl]-1-naphthalenyl]azo]-2-methoxyphenyl]amino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

L7 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1978:512303 CAPLUS  
 DOCUMENT NUMBER: 89:112303  
 ORIGINAL REFERENCE NO.: 89:17351a, 17354a  
 TITLE: Water-soluble quaternary ammonium dyes  
 INVENTOR(S): Jefferies, Patrick J.; Groumpe, Nathan N.  
 PATENT ASSIGNEE(S): Sterling Drug Inc., USA  
 SOURCE: U.S., 77 pp. Continuation-in-part of U.S. 3,839,426.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3996282	A	19761207	US 1974-486180	19740705
US 3709903	A	19730109	US 1970-51676	19700701
US 3839426	A	19741001	US 1970-51690	19700701
GB 1333837	A	19731017	GB 1971-29451	19710622
CA 940628	A1	19740122	CA 1971-116474	19710623
US 3784599	A	19740108	US 1971-201153	19711122
US 3935182	A	19760127	US 1973-332511	19730214
CA 940121	A2	19740115	CA 1973-163853	19730216
US 4103092	A	19780725	US 1975-595864	19750714
US 4065500	A	19771227	US 1976-672428	19760331
US 4146558	A	19790327	US 1977-839975	19771006
US 4206144	A	19800603	US 1978-963081	19781122
PRIORITY APPLN. INFO.:			US 1966-351968	A2 19660623
			US 1968-777854	A2 19681121
			US 1970-51676	A2 19700701
			US 1970-51690	A2 19700701
			US 1971-201153	A2 19711122
			US 1973-332511	A2 19730214
			US 1966-331968	A2 19660304
			CA 1969-65436	A3 19691021
			US 1970-51673	A2 19700701
			US 1974-486180	A2 19740705
			US 1975-595864	A2 19750714
			US 1976-672428	A2 19760331
			US 1976-672428	A2 19760331
			US 1977-839975	A2 19771006

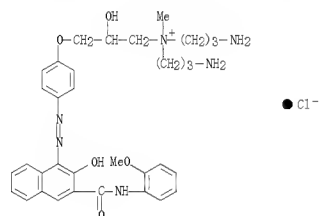
GRAPHIC IMAGE:

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

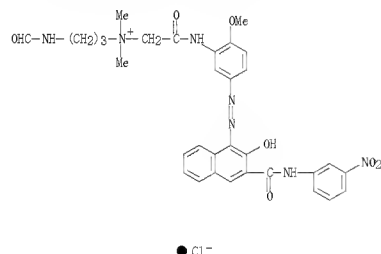
ABSTRACT:  
 Approx. 100 cationic water-soluble azo and disazo dyes for paper were prepared which had good bleachability and good bleed-fastness properties. The dyes were prepared by conventional azo coupling techniques and the preparation of intermediates was extensively described. Representative of the dyes prepared are: I (R = R1) [38901-94-9], II [40948-99-0], and III [66755-16-6].

IT 40948-45-6P 40948-96-7P 66754-92-5P  
 66754-94-7P  
 RL: IMP (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (preparation and spectrum of)  
 RN 40948-45-6 CAPLUS

L7 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

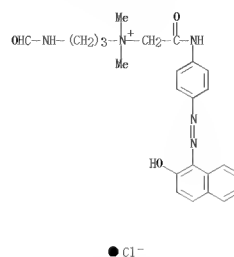


RN 66754-94-7 CAPLUS  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[5-[[2-hydroxy-3-[[[3-nitrophenyl]amino]carbonyl]-1-naphthalenyl]azo]-2-methoxyphenyl]amino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

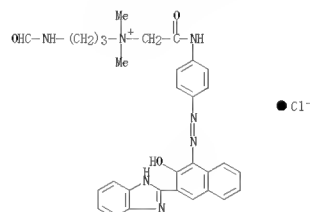


IT 40948-98-9P  
 RL: IMP (Industrial manufacture); PREP (Preparation)  
 (preparation of)  
 RN 40948-98-9 CAPLUS  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[4-[[2-hydroxy-3-[[[2-methoxyphenyl]amino]carbonyl]-1-naphthalenyl]azo]phenyl]amino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

L7 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[4-[[2-hydroxy-1-naphthalenyl]azo]phenyl]amino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

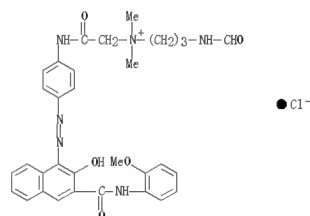


RN 40948-96-7 CAPLUS  
 CN 1-Propanaminium, N-[2-[[4-[[3-(1H-benzimidazol-2-yl)-2-hydroxy-1-naphthalenyl]azo]phenyl]amino]-2-oxoethyl]-3-(formylamino)-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)



RN 66754-92-5 CAPLUS  
 CN 1-Propanaminium, N,N-bis(3-aminopropyl)-2-hydroxy-3-[4-[[2-hydroxy-3-[[[2-methoxyphenyl]amino]carbonyl]-1-naphthalenyl]azo]phenoxy]-N-methyl-, chloride (9CI) (CA INDEX NAME)

L7 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L7 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2008 ACS ON STN  
 ACCESSION NUMBER: 1973:86910 CAPLUS  
 DOCUMENT NUMBER: 78:86910  
 ORIGINAL REFERENCE NO.: 78:13713a,13716a  
 TITLE: Water-soluble quaternary ammonium salts of basic azo dyes  
 PATENT ASSIGNEE(S): Sterling Drug Inc.  
 SOURCE: Brit., 40 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1299090	A	19721206	GB 1969-1299090	19691021
CA 940121	A2	19740115	CA 1973-163853	19730216
PRIORITY APPLN. INFO.:			US 1968-777884	A 19681121
			CA 1969-65436	A3 19691021

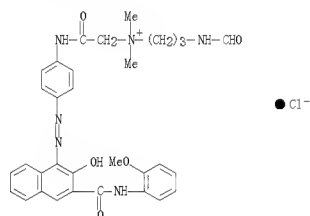
## ABSTRACT:

Sixty azo and disazo dyes were prepared by incorporating quaternary intermediate I (I, R = H, H<sub>2</sub>N; R<sub>1</sub> = H, MeO; Y = lower alkylene, NHCOCH<sub>2</sub>, NR<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>; R<sub>2</sub> = lower alkyl, R<sub>3</sub> = lower alkyl, lower alkenyl, R<sub>4</sub> = lower alkyl, lower aminoalkyl; (R<sub>3</sub>R<sub>4</sub>) = cycloalkyl, R<sub>5</sub> = H, CHO, lower acyl, benzoyl; n = 2,3,6] or a deazo or coupling component into the dyes and they were used to dye paper bleachable, bleed-fast shades. Thus, Me<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCHO was condensed with 4,3-MeO(O<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>CH<sub>2</sub>Cl and the NO<sub>2</sub> group on the condensation product reduced to give diazo intermediate I (R = H<sub>2</sub>N, R<sub>1</sub> MeO, Y = CH<sub>2</sub>, R<sub>3</sub> = R<sub>4</sub> = Me, R<sub>5</sub> = CHO, n = 3) [38901-96-8] which was diazotized and coupled with p-C<sub>6</sub>H<sub>4</sub>(NHCOCH<sub>2</sub>Ac)<sub>2</sub> to give disazo dye II (R<sub>5</sub> = CHO) [38901-94-9], which dyed paper a bleachable yellow shade with slight bleeding. Hydrolysis of II (R<sub>5</sub> = CHO) in aqueous HCl gave disazo dye II (R<sub>5</sub> = H) [38901-96-0] which was significantly more bleed-fast than the unhydrolyzed dye. In another typical example, O<sub>6</sub>H<sub>4</sub>NtCH<sub>2</sub>CH<sub>2</sub>N+Me<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCHO Cl<sup>-</sup> was used as the coupling component with diazotized 2,4-Cl(O<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> to give azo dye (III) [38901-96-1].

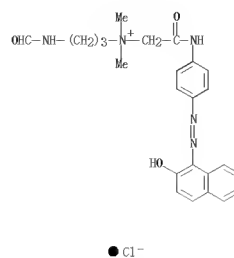
IT 40948-45-6P 40948-96-7P 40948-98-9P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)

RN 40948-45-6 CAPLUS  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[4-[(2-hydroxy-1-naphthalenyl)azo]phenylamino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

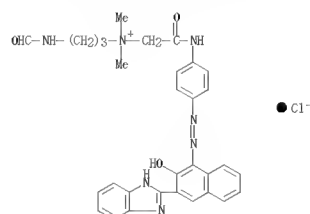
L7 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2008 ACS ON STN (Continued)



L7 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2008 ACS ON STN (Continued)



RN 40948-96-7 CAPLUS  
 CN 1-Propanaminium, N-[2-[[4-[[3-(1H-benzimidazol-2-yl)-2-hydroxy-1-naphthalenyl]azo]phenylamino]-2-oxoethyl]-3-(formylamino)-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)



RN 40948-98-9 CAPLUS  
 CN 1-Propanaminium, 3-(formylamino)-N-[2-[[4-[[2-hydroxy-3-[[2-methoxyphenyl]amino]carbonyl]-1-naphthalenyl]azo]phenylamino]-2-oxoethyl]-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

L7 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2008 ACS ON STN

ACCESSION NUMBER: 1969:422903 CAPLUS  
 DOCUMENT NUMBER: 71:23903  
 ORIGINAL REFERENCE NO.: 71:4247a, 4250a  
 TITLE: Water-soluble monoazo dyes  
 INVENTOR(S): Gmaj, Jan; Scibisz, Halina  
 PATENT ASSIGNEE(S): Instytut Przemysłu Organicznego  
 SOURCE: Pol., 4 pp.  
 CODEN: POXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Polish  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 54538		19680224	PL	19650728

## ABSTRACT:

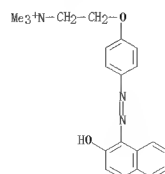
The title compds. (I) are yellow to red dyes for polyacrylonitrile fibers. Thus, 4.4 parts 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>OCH<sub>2</sub>CH<sub>2</sub>NMe<sub>3</sub>+ MeSO<sub>4</sub><sup>-</sup> was diazotized and coupled with 2.65 parts 1-phenyl-3-methyl-5-pyrazolone (II) and salted with NaCl to give I (R = Me, OH = II), a yellow dye for polyacrylonitrile fibers, in 90% yield. Similarly, other I were prepared (diazotized component, OH, % yield, and shade given): 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>OCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>+ PhSO<sub>3</sub><sup>-</sup>, 2-ClOH<sub>7</sub>OH, 96, orange; x,2-Cl (H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>+ MeSO<sub>4</sub><sup>-</sup>, 2,4-dihydroxyquinoline, 92, yellow; 4,5,2-Cl (O<sub>2</sub>N) (H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>+ MeSO<sub>4</sub><sup>-</sup>, AcCH<sub>2</sub>CONHPh, 92, yellow; 4,3-H<sub>2</sub>N (O<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>NMe<sub>3</sub>+ MeSO<sub>4</sub><sup>-</sup>, 3,2-HOC<sub>10</sub>H<sub>6</sub>CONHPh, 96, red; 4-(p-morpholinoethoxy)aniline diazotized and coupled with 3-AcNHOC<sub>6</sub>H<sub>4</sub>N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub> gave a red dye in 80% yield (quaternizing agent not specified). 4,2-Br (H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>N-Me<sub>2</sub> diazotized and coupled with PhNMe<sub>2</sub> and the product treated with PhSO<sub>3</sub>Me gave an orange dye.

IT 23472-92-6P 23472-94-6P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)

RN 23472-92-6 CAPLUS  
 CN Ammonium, [2-[p-[(2-hydroxy-1-naphthyl)azo]phenoxy]ethyl]trimethyl-, benzenesulfonate (8CI) (CA INDEX NAME)

CM 1

CRN 47488-90-4  
 CMF C21 H24 N3 O2



CM 2

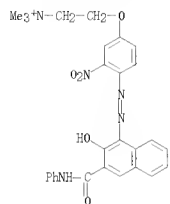
CRN 3198-32-1  
 CMF C6 H5 O3 S

L7 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 23479-94-8 CAPLUS  
 CN Ammonium, [2-[4-[[2-hydroxy-3-(phenylcarbamoyl)-1-naphthyl]azo]-3-nitrophenoxy]ethyl]trimethyl-, methyl sulfate (salt) (8CI) (CA INDEX NAME)

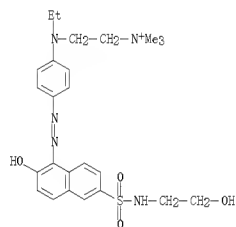
CM 1  
 CRN 47799-87-1  
 CMF C28 H28 N5 O5



CM 2  
 CRN 21228-90-0  
 CMF C H5 O4 S



L7 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 CN Ammonium, [2-[N-ethyl-p-[[2-hydroxy-6-[(2-hydroxyethyl)sulfamoyl]-1-naphthyl]azo]anilino]ethyl]trimethyl-, chloride (8CI) (CA INDEX NAME)



L7 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1966:105009 CAPLUS  
 DOCUMENT NUMBER: 64:105009  
 ORIGINAL REFERENCE NO.: 64:19642h, 19643a-b  
 TITLE: Cationic azo dyes  
 INVENTOR(S): Yamatani, Wataru; Inoue, Shozo  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd.  
 SOURCE: 5 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

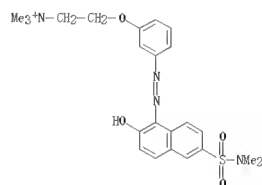
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 41002181	B4	19660215	JP	19630806

PRIORITY APPLN. INFO.: JP 19630806  
 GRAPHIC IMAGE: For diagram(s), see printed CA Issue.

ABSTRACT:  
 Manufacture of I, which dye acrylonitrile fibers red to orange shades, was described. Thus, 10 parts 3-[2,4-Me(H2N)CH2N-N]C6H4NMe3+X- is diazotized and coupled with 11.2 parts 2,6-HOC10H6SO2N(CH2CH2OH)2 to give I (R1 = R2 = CH2CH2OH, R3 = Me), maximum 503 mμ, red on polyacrylonitrile. Similarly are prepared the following red I (R1, R2, R3, and λmaximum in mμ given): R, H, Me, 508; H, (CH2)2OH, Me, 504; H, Me, Me, 504; Me, CH2(CHOH)4CH2OH, Me, 510; Me, Me, Me, 504; H, (CH2)2OH, H, 538. Also prepared are 3-H2NC6H4OCH2CH2NMe3+Br- → 2,6-HOC10H6SO2NMe2 and 4-H2NC6H4N(Et)CH2CH2NMe3+Cl- → 2,6-HOC10H6SO2NHC2H4CH2OH which dye polyacrylonitrile fiber yellowish orange and dark red, resp.

IT 5815-87-2, Ammonium, [2-[m-[[6-(dimethylsulfamoyl)-2-hydroxy-1-naphthyl]azo]phenoxy]ethyl]trimethyl-, bromide 5815-88-3, Ammonium, [2-[N-ethyl-p-[[2-hydroxy-6-[(2-hydroxyethyl)sulfamoyl]-1-naphthyl]azo]anilino]ethyl]trimethyl-, chloride

RN 5815-87-2 CAPLUS  
 CN Ammonium, [2-[m-[[6-(dimethylsulfamoyl)-2-hydroxy-1-naphthyl]azo]phenoxy]ethyl]trimethyl-, bromide (8CI) (CA INDEX NAME)



RN 5815-88-3 CAPLUS

L7 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1965:499109 CAPLUS  
 DOCUMENT NUMBER: 63:99109  
 ORIGINAL REFERENCE NO.: 63:18314e-g  
 TITLE: Fiber-reactive dyes  
 PATENT ASSIGNEE(S): Farbwerke Hoechst A.-G.  
 SOURCE: 13 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1570454		19640821	FR	19621003

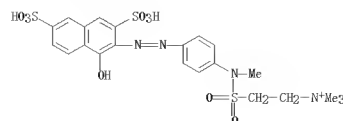
PRIORITY APPLN. INFO.: DE  
 GRAPHIC IMAGE: For diagram(s), see printed CA Issue.

ABSTRACT:  
 The title compds. (I) for dyeing cellulosic and synthetic fibers are monoazo dyes containing β-tertiary amino-, or β-quaternary aminoethylsulfonyl residues. I are prepared by coupling diazotized aniline derivs. (II) containing the sulfonyl residue with a variety of coupling components. II are prepared by Raney Ni catalytic hydrogenation of the corresponding nitro compds. Thus, 287 parts p-O2NC6H4N(Me)SO2CH2CH2NMe2 in 1000 parts EtOH is reduced with H at 30 atmospheric and at 20-30° in the presence of 40 parts Raney Ni to give 240 parts 4-H2NC6H4N(Me)SO2CH2CH2NMe2 (III), m. 127-8° (BuOH). III diazotized and coupled with 3,6,1-(HO3S)2C10H5OH (IV) gives an azo dye, scarlet on cotton. Also prepared are [p-H2NC6H4N(Me)SO2CH2CH2N+Me3] MeSO4- (m. 177°) (V) → IV, scarlet; V → 3,6,8,1-(HO3S)2(AcNH)C10H4OH (VI), bluish-red; 3-H2NC6H4N(Me)SO2CH2CH2NMe2 (m. 92-3°) → IV, reddish-orange; [3-H2NC6H4N(Me)SO2CH2CH2N+Me3] MeSO4- → IV, red-orange; VII → IV, scarlet; VII → VI, bluish red.

IT 3739-50-2P, Ammonium, [2-[p-[[1-hydroxy-3,6-disulfo-2-naphthyl]azo]phenyl]methylsulfamoyl]ethyl]trimethyl-, methyl sulfate 3740-67-8P, Ammonium, [2-[m-[[1-hydroxy-3,6-disulfo-2-naphthyl]azo]phenyl]methylsulfamoyl]ethyl]trimethyl-, methyl sulfate  
 RL: PREP (Preparation)  
 (preparation of)

RN 3739-50-2 CAPLUS  
 CN Ethanaminium, 2-[[[4-[[1-hydroxy-3,6-disulfo-2-naphthalenyl]azo]phenyl]methylamino]sulfonyl]-N,N,N-trimethyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1  
 CRN 50568-41-7  
 CMF C22 H27 N4 O9 S3



CM 2  
 CRN 21228-90-0

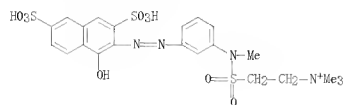
L7 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
CMF C H3 04 S

Me-O-SO<sub>3</sub><sup>-</sup>

RN 3740-67-8 CAPLUS  
CN Ethanaminium, 2-[[[3-[(1-hydroxy-3,6-disulfo-2-naphthalenyl)azo]phenyl]methylanino]sulfonyl]-N,N,N-trimethyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 50568-40-6  
CMF C22 H27 N4 O9 S3



CM 2

CRN 21228-90-0  
CMF C H3 04 S

Me-O-SO<sub>3</sub><sup>-</sup>

L7 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
CM 2

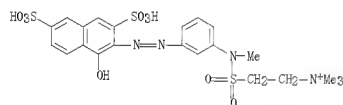
CRN 21228-90-0  
CMF C H3 04 S

Me-O-SO<sub>3</sub><sup>-</sup>

RN 3740-67-8 CAPLUS  
CN Ethanaminium, 2-[[[3-[(1-hydroxy-3,6-disulfo-2-naphthalenyl)azo]phenyl]methylanino]sulfonyl]-N,N,N-trimethyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 50568-40-6  
CMF C22 H27 N4 O9 S3



CM 2

CRN 21228-90-0  
CMF C H3 04 S

Me-O-SO<sub>3</sub><sup>-</sup>

L7 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1965:489496 CAPLUS  
DOCUMENT NUMBER: 63:89496  
ORIGINAL REFERENCE NO.: 63:165077-g  
TITLE: Azo dyes containing N-methylsulfonamido groups  
PATENT ASSIGNEE(S): Farbwerke Hoechst AG  
SOURCE: 28 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 638177		19640403	BE	
PRIORITY APPLN. INFO.:			DE	19621003

GRAPHIC IMAGE: For diagram(s), see printed CA Issue.

ABSTRACT:

Comps. of the general formula I are prepared and give fast dyeings on cotton, viscose, polyamides, and aromatic polyesters. Thus, 287 parts p-O<sub>2</sub>C<sub>6</sub>H<sub>4</sub>NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub> in 1000 parts alc. is hydrogenated at 20-30° and 50 atmospheric in the presence of 40 parts Raney Ni to give 240 parts p-H<sub>2</sub>NCH<sub>2</sub>HANMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub> (II), m. 127-8° (BoOH). Similarly prepared is m-H<sub>2</sub>NCH<sub>2</sub>HANMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>, m. 92-3° (BoOH). II (25 parts) in 150 parts H<sub>2</sub>O is diazotized and coupled with 56 parts 3,6,1-(HO<sub>3</sub>S)<sub>2</sub>C<sub>10</sub>H<sub>5</sub>OH to give I (X = H, Y = NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>), red powder, orange-red in H<sub>2</sub>O, scarlet on cotton. Similarly, other I are prepd (X, Y, appearance, color of aqueous solution, and color on cotton given): NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>, H, red powder, red-orange, reddish orange; H, NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>3</sub> MeSO<sub>4</sub><sup>-</sup>, dark powder, -, -; NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>3</sub> MeSO<sub>4</sub><sup>-</sup>, H, dark powder, orange-red, reddish orange; H, NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>3</sub> MeSO<sub>4</sub><sup>-</sup> (R = 1-pyridinium), -, scarlet.

IT 3739-50-2P, Ammonium, [2-[[[p-[(1-hydroxy-3,6-disulfo-2-naphthyl)azo]phenyl]methylsulfonyl]ethyl]trimethyl, methyl sulfate  
3740-67-8P, Ammonium, [2-[[[m-[(1-hydroxy-3,6-disulfo-2-naphthyl)azo]phenyl]methylsulfonyl]ethyl]trimethyl, methyl sulfate  
RL: PREP (Preparation)

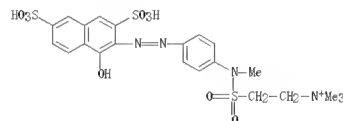
(preparation of)

RN 3739-50-2 CAPLUS

CN Ethanaminium, 2-[[[4-[(1-hydroxy-3,6-disulfo-2-naphthalenyl)azo]phenyl]methylanino]sulfonyl]-N,N,N-trimethyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 50568-41-7  
CMF C22 H27 N4 O9 S3



L7 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1965:487522 CAPLUS  
DOCUMENT NUMBER: 63:87522  
ORIGINAL REFERENCE NO.: 63:16067g-h  
TITLE: Regular character of hydrocarbon transformation in earth  
AUTHOR(S): Nikonov, V. F.  
CORPORATE SOURCE: Geol. Admin., Tyumen  
SOURCE: Geol. i Geofiz., Akad. Sank SSSR, Sibirsk. Otd. (1965), (6), 117-18  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

ABSTRACT: Recalcn. of the average composition of natural gases from the Paleozoic, Mesozoic, and Cenozoic formations showed that the composition of the gases depends more on the depth of deposit than on the age, lithologic composition, and geoclim. properties of reservoir rock. With increased depth of gas deposit, the number of pools, containing no heavy hydrocarbons, decreases sharply. No deposit without heavy hydrocarbons was detected at the depth of 2000 m. In the same direction, i.e. with increased depth, the total content of CO<sub>2</sub>, the d. of the natural gas, and the C<sub>2</sub>:C<sub>3</sub> and C<sub>3</sub>:C<sub>4</sub> ratios also increased.

IT 3739-50-2

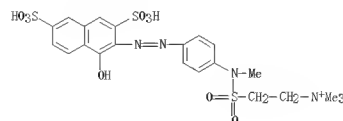
(Derived from data in the 7th Collective Formula Index (1962-1966))

RN 3739-50-2 CAPLUS

CN Ethanaminium, 2-[[[4-[(1-hydroxy-3,6-disulfo-2-naphthalenyl)azo]phenyl]methylanino]sulfonyl]-N,N,N-trimethyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 50568-41-7  
CMF C22 H27 N4 O9 S3



CM 2

CRN 21228-90-0  
CMF C H3 04 S

Me-O-SO<sub>3</sub><sup>-</sup>

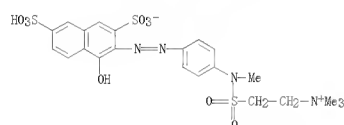
L7 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1965:15643 CAPLUS  
 DOCUMENT NUMBER: 62:15643  
 ORIGINAL REFERENCE NO.: 62:2852h, 2853a-b  
 TITLE: Azo dyes  
 PATENT ASSIGNEE(S): Farbwerke Hoechst AG  
 SOURCE: 20 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 298761		19640611	NL	
PRIORITY APPLN. INFO.:			DE	19621003

ABSTRACT:  
 Dyes of the general formula  $RN:NANMeSO_2CH_2CH_2NMe_2$  or  $RN:NANMeSO_2CH_2Z^+X^-$ , where R is 1,3,6,2-HO(SO<sub>3</sub>)<sub>2</sub>ClOH<sub>4</sub>, A is m- or p-OH<sub>4</sub>, Z<sup>+</sup> is Me<sub>3</sub>N<sup>+</sup> or 1-pyridinium, and X<sup>-</sup> is MeSO<sub>4</sub><sup>-</sup> or HSO<sub>4</sub><sup>-</sup>, are prepared. They give wash- and lightfast shades on cotton. Thus, 20 parts 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NMeSO<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub> [m. 127-8° (BuOH)] was diazotized and coupled with 56 parts 55% 1,3,6-HOClOH<sub>4</sub>(SO<sub>3</sub>H)<sub>2</sub> (I) to give a red powder dyeing scarlet shades. Similarly, other dyes were prepared from I (azo component and shade of dye given): 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N<sup>+</sup>Me<sub>3</sub> MeSO<sub>4</sub><sup>-</sup>.HCl [m. 177° (MeOH-AcOH)], scarlet; 3-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NMeSO<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub> [m. 92-3° (BuOH)], reddish orange; 3-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N<sup>+</sup>Me<sub>3</sub> MeSO<sub>4</sub><sup>-</sup>, reddish orange; 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>NMeSO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>Z<sup>+</sup> (Z<sup>+</sup> = 1-pyridinium), scarlet.

IT 1262-06-2P, Ammonium, [2-[[p-[(1-hydroxy-3,6-disulfo-2-naphthyl)azo]phenyl]methylsulfamoyl]ethyl]trimethyl, hydroxide, inner salt  
 3755-67-6P, Ammonium, [2-[[m-[(1-hydroxy-3,6-disulfo-2-naphthyl)azo]phenyl]methylsulfamoyl]ethyl]trimethyl, hydroxide, inner salt  
 RL: PREP (Preparation)  
 (Preparation of)

RN 1262-06-2 CAPLUS  
 CN Ammonium [2-[[p-[(1-hydroxy-3,6-disulfo-2-naphthyl)azo]phenyl]methylsulfamoyl]ethyl]trimethyl-, [2-[[p-[(1-hydroxy-3,6-disulfo-2-naphthyl)azo]phenyl]methylsulfamoyl]ethyl]trimethyl-, hydroxide, inner salt (SCI) (CA INDEX NAME)



RN 3755-67-5 CAPLUS  
 CN Ammonium, [2-[[m-[(1-hydroxy-3,6-disulfo-2-naphthyl)azo]phenyl]methylsulfamoyl]ethyl]trimethyl-, hydroxide, inner salt (SCI) (CA INDEX NAME)

L7 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1964:83356 CAPLUS  
 DOCUMENT NUMBER: 60:83356  
 ORIGINAL REFERENCE NO.: 60:14641f-g  
 TITLE: Azo dyes  
 INVENTOR(S): Matsui, Hirotugu  
 SOURCE: 6 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 38017835		19630911	JP	
PRIORITY APPLN. INFO.:				19610519
ABSTRACT:				19610519

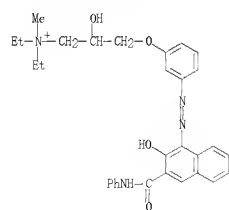
Azo dyes containing an Et<sub>2</sub>NCH<sub>2</sub>CH(OH)CH<sub>2</sub>O group are prepared. Thus, 2.4 parts 3-Et<sub>2</sub>NCH<sub>2</sub>CH(OH)CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> (I) is diazotized and coupled with 1.2 parts PhNMe<sub>2</sub> to give a dye which dyes polyacrylonitrile fibers (II) yellowish orange shades from a boiling acid bath. Also prepared are the following azo dyes (shade on II given): I → Naphthol-AS-TR, red; 2,4-MeO(O<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> (III) → I, reddish orange; [(III) → I] → PhNMe<sub>2</sub> (IV), dark violet. IV and Me<sub>2</sub>SO<sub>4</sub> gives the quaternary ammonium salt (V), dark violet on II. V is also prepared by methylating III with Me<sub>2</sub>SO<sub>4</sub> followed by diazotizing and coupling with I.

IT 90229-23-5  
 (Derived from data in the 7th Collective Formula Index (1962-1966))

RN 90229-23-5 CAPLUS  
 CN Diethyl[2-hydroxy-3-[m-[[2-hydroxy-3-(phenylcarbamoyl)-1-naphthyl]azo]phenoxy]propyl]methylammonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

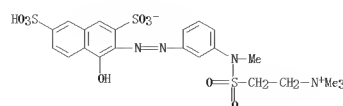
CRN 90229-22-4  
 CMF C31 H35 N4 O4



CM 2

CRN 21228-90-0  
 CMF C H3 O4 S

L7 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L7 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

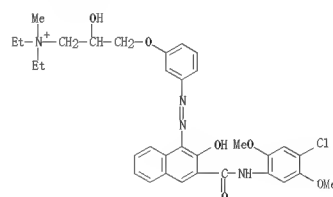
Me-O-SO<sub>3</sub><sup>-</sup>

IT 106194-19-8P, Ammonium, [3-[m-[[3-[(4-chloro-2,5-dimethoxyphenyl)carbamoyl]-2-hydroxy-1-naphthyl]azo]phenoxy]-2-hydroxypropyl]diethylmethyl, methyl sulfate  
 RL: PREP (Preparation)  
 (Preparation of)

RN 106194-19-8 CAPLUS  
 CN [3-[m-[[3-[(4-chloro-2,5-dimethoxyphenyl)carbamoyl]-2-hydroxy-1-naphthyl]azo]phenoxy]-2-hydroxypropyl]diethylmethylammonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

CRN 106194-18-7  
 CMF C33 H38 Cl N4 O6



CM 2

CRN 21228-90-0  
 CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

L7 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1964:83355 CAPLUS  
 DOCUMENT NUMBER: 60:83355  
 ORIGINAL REFERENCE NO.: 60:14641c-f  
 TITLE: Azo dyes for cellulosic and nitrogen containing fibers  
 INVENTOR(S): Matsuo, Masayoshi; Yamatani, Wataru  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd.  
 SOURCE: 7 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 38025781	B4	19631203	JP	19610511
			JP	19610511

PRIORITY APPL. INFO.: For diagram(s), see printed CA Issue.

## ABSTRACT:

Chlorotriazine dyes are prepared. Thus, 1,8,3,6-AcNH(OH)C10H4(SO3H)2 is coupled with diazotized 2-H2NCH4SO3H and the resulting monoazo dye is deacetylated, condensed with an equimolar amount of cyanuric chloride (I), then with an equimolar amount of 2,5-(H2N)2C6H3SO3H, and finally condensed with an equimolar amount of I to give II. Cotton cloth 50 is soaked in an aqueous solution 1000 containing II 1 NaCl 20 parts to give cloth dyed a fast red shade. Similarly, other dyes are prepared (reactants and shade given): 4,2-Me(OHSS)C6H3NH2 → [2,8,6-H2N(OH)C10H6SO3H, I, [4,2-H2N(OHSS)C6H3CH:][2], I, red on viscose; 1-amino-4-(4'-aminoaniline)anthraquinone-2,5,3'-trisulfonic acid, I, [2,5-HOSS(AcNH)C6H3NH2 + PhNHMe, deacetylated], I, green on silk; [3,4-H2N(OHSS)C6H3NH2, I, H2N(CH2)3NH2 (1.6 moles), I] → 3-methyl-5-pyrazolone, greenish yellow on nylon; [2,5-HO(OHSS)C6H3NH2 + 5,2,7-HO(MeNH)C10H6SO3H, metalized with Cu], I, 2,5-(H2N)C6H3SO3 H, I (dye IID), red on cotton; [Cu phthalocyaninetetrasulfonyl chloride, 2,5-(H2N)2C6H3SO3H (1 mole), acid chloride hydrolyzed], I (1 mole), H2N(CH2)3NH2 (1.6 moles), I (1 mole), blue on cotton.

IT 90229-23-5

(Derived from data in the 7th Collective Formula Index (1962-1966))

RN 90229-23-5 CAPLUS

CN Diethyl[2-hydroxy-3-[m-[[[2-hydroxy-3-(phenylcarbamoyl)-1-naphthyl]azo]phenoxy]propyl]methylanmonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

CRN 90229-22-4

CMF C31 H56 N4 O4

L7 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1962:430117 CAPLUS  
 DOCUMENT NUMBER: 57:30117  
 ORIGINAL REFERENCE NO.: 57:60691, 60701-1, 60711a-b  
 TITLE: Azo dyes containing CH2CH(OH)CH2NH2 groups  
 AUTHOR(S): Matsui, I. Koji; Sunaga, Toshio; Kasai, Kazuo  
 CORPORATE SOURCE: Gumma Univ., Kiryu City, Japan  
 SOURCE: Yuki Gosei Kagaku Kyokaiishi (1962), 20, 4539  
 CODEN: YGKKAB; ISSN: 0037-9980  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

ABSTRACT: Reaction of epichlorohydrin followed by Et2NH on PhNH2 and 1-naphthylamine gave 66.6% PhNHCH2CH(OH)CH2NH2 (I) (b2 154-5°) and 65.5% 1-C10H7NHCH2CH(OH)CH2NH2 (II) (b2 210°), resp. Also, the reaction of epichlorohydrin on m-AcNHCH2CH(OH)CH2NH2 followed by reaction with NH4Et and hydrolysis of the product gave 49.5% m-H2NCH2CH(OH)CH2NH2 (III), b5 202-4°, m. 33-5°. Azo dyes were synthesized by use of I and II, resp., as coupling components, and various aromatic primary amines having no CO2H and SO3H groups, such as p-O2NC6H4NH2, p-H2NOC6H4NH2, and others, as diazo components. Also, azo dyes were prepared by using III as diazo component, and PhNHMe2, 2-naphthol, naphthol AS, and 3-methyl-1-phenyl-5-pyrazolone as coupling components. A monoazo dye was also prepared by using III as coupling component and Fast Red B base as diazo component; further diazotation of this dye and coupling with PhNHMe2, naphthol AS, etc. gave disazo dyes. The dyes thus obtained are soluble in dilute AcOH, and have good dyeing affinity for Orlon type polyacrylonitrile fiber, e.g. Exlan L, Vonnell W, and Cashmilon, with color ranges of yellow-orange-red-brown-purple. The quaternary ammonium salts of these dyes also exhibited similar properties.

IT 107307-09-5F, Ammonium, [3-[m-[[[3-(5-chloro-2,4-dimethoxyphenyl)carbamoyl]-2-hydroxy-1-naphthyl]azo]phenoxy]-2-hydroxypropyl]diethylmethyl, methyl sulfate  
 RL: PREP (Preparation)

(preparation of)

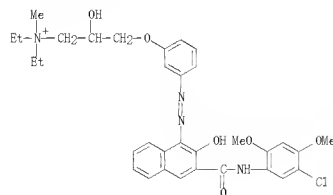
RN 107307-09-5 CAPLUS

CN [3-[m-[[[3-(5-Chloro-2,4-dimethoxyphenyl)carbamoyl]-2-hydroxy-1-naphthyl]azo]phenoxy]-2-hydroxypropyl]diethylmethylammonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

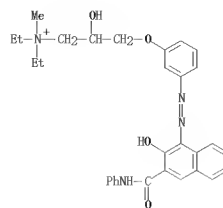
CRN 107307-08-4

CMF C33 H38 Cl N4 O6



CM 2

L7 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO3-

L7 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO3-

L7 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1962:430115 CAPLUS  
 DOCUMENT NUMBER: 57:30115  
 ORIGINAL REFERENCE NO.: 57:6070g  
 TITLE: Printing blankets  
 INVENTOR(S): Brown, Ernest R.  
 PATENT ASSIGNEE(S): Dayco Corp.  
 SOURCE: 2 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3053709		1962:0608	US 1959-850997	1959:1105
GB 906746			GB	
			US	1959:1105

PRIORITY APPLN. INFO.:

ABSTRACT:

Improved release properties of printing blankets were obtained by the addition of 2.5-5 parts of polyethylene powder based on 100 parts by weight polymer to the face or ink-receiving surface layer.

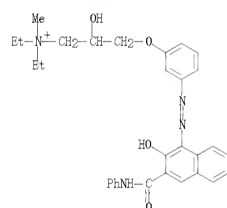
IT 90229-23-5 107307-09-5  
 (Derived from data in the 7th Collective Formula Index (1962-1966))

RN 90229-23-5 CAPLUS

CN Diethyl[2-hydroxy-3-[m-[[[2-hydroxy-3-(phenylcarbamoyl)-1-naphthyl]azo]phenoxy]propyl]methylammonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

CRN 90229-22-4  
 CMF C31 H35 N4 O4



CM 2

CRN 21228-90-0  
 CMF C H3 O4 S

L7 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1962:430114 CAPLUS  
 DOCUMENT NUMBER: 57:30114  
 ORIGINAL REFERENCE NO.: 57:6070g  
 TITLE: Prussian blue pigment  
 INVENTOR(S): Rhodes, William H.  
 PATENT ASSIGNEE(S): Standard Ultramarine & Color Co.  
 SOURCE: 5 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3021191		1962:0213	US 1958-740678	1958:0608

PRIORITY APPLN. INFO.:

ABSTRACT:

A Prussian blue pigment of improved color strength was produced without air drying or grinding by using H<sub>2</sub>O<sub>2</sub> as oxidant. Thus, Na<sub>4</sub>Fe(CN)<sub>6</sub>·10H<sub>2</sub>O 134.2 and (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> 18.3 were dissolved in H<sub>2</sub>O 2500 parts at 30°. A solution of FeSO<sub>4</sub>·7H<sub>2</sub>O 103.2 and 35% H<sub>2</sub>O<sub>2</sub> 18.5 in H<sub>2</sub>O 1250 parts at 30° was stirred in over 30 min. The resultant white precipitate was diluted with H<sub>2</sub>O at 35° to three times its volume, and settled for 48 hrs. The supernatant liquor was decanted, a solution of (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> 12.2 in H<sub>2</sub>O added; the slurry stirred 30 min., adjusted to pH 9.0 with aqueous NH<sub>3</sub>, stirred 2 hrs., treated with a solution of Na<sub>2</sub>C<sub>2</sub>O<sub>4</sub> 8.3 in a small amount of H<sub>2</sub>O, stirred 2 hrs., filtered, washed, stirred in H<sub>2</sub>O treated with 160 parts of 35% H<sub>2</sub>O<sub>2</sub> per 1000 parts of pigment, and agitated 15 min. before filtering. The cake was converted to an ink which, when tested against dry ground ink made from air-oxidized, dried pigment, tested 3-4% strong and red in shade. When compared with flushed 1-stage dichromate-oxidized ink, it was 108% strong and red in shade. The flushed and tinted product from the H<sub>2</sub>O<sub>2</sub>-oxidized pigment was readily dispersible and free from grit and pigment agglomerates.

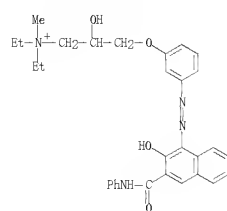
IT 90229-23-5 107307-09-5  
 (Derived from data in the 7th Collective Formula Index (1962-1966))

RN 90229-23-5 CAPLUS

CN Diethyl[2-hydroxy-3-[m-[[[2-hydroxy-3-(phenylcarbamoyl)-1-naphthyl]azo]phenoxy]propyl]methylammonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

CRN 90229-22-4  
 CMF C31 H35 N4 O4



L7 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

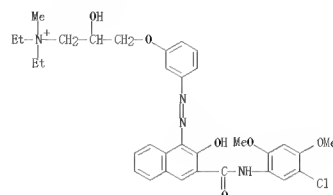
Me-O-SO<sub>3</sub><sup>-</sup>

RN 107307-09-5 CAPLUS

CN [3-[m-[[[3-[ (5-Chloro-2,4-dimethoxyphenyl)carbamoyl]-2-hydroxy-1-naphthyl]azo]phenoxy]-2-hydroxypropyl]diethylmethylammonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

CRN 107307-08-4  
 CMF C33 H38 Cl N4 O6



CM 2

CRN 21228-90-0  
 CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

L7 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CM 2

CRN 21228-90-0  
 CMF C H3 O4 S

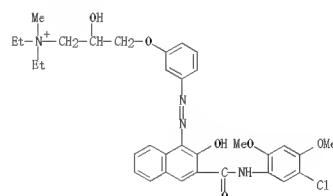
Me-O-SO<sub>3</sub><sup>-</sup>

RN 107307-09-5 CAPLUS

CN [3-[m-[[[3-[ (5-Chloro-2,4-dimethoxyphenyl)carbamoyl]-2-hydroxy-1-naphthyl]azo]phenoxy]-2-hydroxypropyl]diethylmethylammonium methyl sulfate (7CI) (CA INDEX NAME)

CM 1

CRN 107307-08-4  
 CMF C33 H38 Cl N4 O6



CM 2

CRN 21228-90-0  
 CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

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      OTTO RICHARD"/AU)
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L13     5 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND CATIONIC AND NAPHTH?
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L13 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2006:1038111 CAPLUS  
 DN 145:382945  
 TI Reductive coloring system for keratin fibers comprising a carbonyl compound and an oxime ester  
 IN Speckbacher, Markus; Chassot, Jessica; Braun, Hans-Juergen  
 PA Wella Aktiengesellschaft, Germany  
 SO Eur. Pat. Appl., 28pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

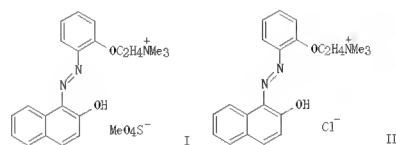
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1707188	A1	20061004	EP 2005-7230	20050402
EP 1707188	B1	20070801		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, HR, HU, PL, SK, BA, HR, IS, YU				
AT 368446	T	20070815	AT 2005-7230	20050402
ES 2290806	T3	20080216	ES 2005-7230	20050402
AU 2006232897	A1	20061012	AU 2006-232897	20060321
CA 2601084	A1	20061012	CA 2006-2601084	20060321
WO 2006107894	A1	20061012	WO 2006-US10283	20060321
W: AE, AG, AL, AM, AT, AU, AZ, BA, BE, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DE, EG, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MN, NE, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
US 2006024272	A1	20061102	US 2006-295791	20060331
IN 2007DN07191	A	20071012	IN 2007-DN7191	20070918
CN 101161014	A	20080326	CN 2006-8000924	20070326
MX 200711975	A	20071207	MX 2007-11975	20070327
PRAI EP 2006-7230	A	20060402		
WO 2006-US10283	W	20060321		
OS MARPAT 145:382945				

AB The invention relates to an agent for coloring keratin-containing fibers, in particular human hair, comprising (a) ascorbic acid, (b) at least one cationic oxime ester, and (c) at least one reactive carbonyl compound, as well as method of coloring hair using this agent. Thus, a hair colorant composition comprised 5 mmol 4-(dimethylamino)-1-[2-[[[1,3-dioxo-1,3-dihydro-2H-inden-2-ylidene)amino]oxy]-2-oxoethyl] pyridinium bromide (preparation given), 5 mmol carbonyl compound, e.g., 4-hydroxy-3-methoxybenzaldehyde, 5.0 g ethanol, 4.0 g decylpolyglucose, 0.2 g disodium EDTA, and to 100.0 g water. The hair coloring was carried out by applying an amount of the colorant and of the reducing agent ascorbic acid (preferably 1-4 g/10 mL of coloring solution) adequate for the hair coloring to the hair. After a contact time of 30 min at 40°, the hair was rinsed with lukewarm water and dried, resulting in a flax/fawn color.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE.FORMAT

L13 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2005:1004830 CAPLUS  
 DN 143:287907  
 TI Cationic naphthylidazo dyes and colorants for keratin fibers containing said compounds.  
 IN Gettel, Otto; Hayoz, Andre; Braun, Hans-Juergen  
 PA Wella Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 48 pp.  
 CODEN: PIXXDE  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005085362	A1	20050915	WO 2004-EP14189	20041213
W: AE, AG, AL, AM, AT, AU, AZ, BA, BE, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
DE 102004010999	A1	20050922	DE 2004-102004010999	20040306
EP 1740657	A1	20070110	EP 2004-803818	20041213
EP 1740657	B1	20070912		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
BR 2004018613	A	20070602	BR 2004-18613	20041213
AT 373061	T	20070915	AT 2004-803818	20041213
JP 2007527457	T	20070927	JP 2007-501128	20041213
ES 2294565	T3	20080401	ES 2004-803818	20041213
US 20080167453	A1	20080710	US 2006-584955	20060630
PRAI DE 2004-102004010999	A	20040306		
WO 2004-EP14189	W	20041213		
OS MARPAT 143:287907				
GI				



AB Cationic naphthylidazo dyes such as, an example I or II useful for non-oxidative dyeing keratin fibers, especially hair are prepared by catalytic hydriding of nitrocompounds followed by a standard diazotization in water and coupling with 1- or 2-naphthols. Thus, I prepared by

L13 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 redn. of 34 g N,N,N-triphenyl-2-(2-nitrophenoxy)ethanaminium methylsulfate with H2 (pressure 9 bar) in the presence of Pd/C catalyst followed by a std. diazotization in water with NaNO2 and sulfamic acid and coupling with a soln. of 2-naphthol in i-PrOH was used in a compn. for dyeing hair contg. 4.0 g of decyl glucoside, 5.0 g of ethanol and 0.0025 mol of this dye in 100 g of water at pH 7.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE.FORMAT

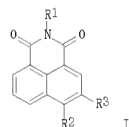
L13 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2005:823779 CAPLUS  
 DN 143:231387  
 TI Neutral and cationic naphthalene derivatives and dyes containing said compounds for dyeing keratin fibers.  
 IN Speckbacher, Markus; Braun, Hans-Juergen; Chassot, Jessica  
 PA Wella Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 46 pp.  
 CODEN: PIXXDE  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006075574	A1	20060818	WO 2004-EP12078	20041026
W: AE, AG, AL, AM, AT, AU, AZ, BA, BE, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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DE 103004006142	A1	20060825	DE 2004-102004006142	20040207
EP 1729723	A1	20061213	EP 2004-790661	20041026
EP 1729723	B1	20080604		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
BR 2004018499	A	20070619	BR 2004-18499	20041026
JP 2007520606	T	20070726	JP 2006-551730	20041026
AT 397437	T	20080615	AT 2004-790661	20041026
US 20070151046	A1	20070705	US 2006-585031	20060629
PRAI DE 2004-102004006142	A	20040207		
WO 2004-EP12078	W	20041026		
OS CASREACT 143:231387; MARPAT 143:231387				
AB Neutral and cationic naphthalene derivs. are used for dyeing keratin fibers especially human hair together with H2O2 and other oxidizing agents.				

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE.FORMAT

L13 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 2005:811657 CAPLUS  
 DN 143:216317  
 TI Lightening direct hair dyes containing cationic  
 naphthalene derivatives  
 IN Goeckhaefer, Markus; Braun, Hans-Juergen  
 PA Wella Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005074872	A1	20050818	WO 2004-EP12077	20041026
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GR, HA, HK, HU, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BF, BG, BR, CA, CH, CN, CO, CR, CU, CY, DE, DK, EE, EG, ES, FI, FR, GB, GR, HA, HK, HU, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, DE 102004006141 A1 20050825 DE 2004-102004006141 20040207				
EP 1720613	A1	20061115	EP 2004-790660	20041026
R: AI, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
BR 2004018507	A	20070522	BR 2004-18507	20041026
JP 2007520604	7	20070726	JP 2006-551729	20041026
US 20070119000	A1	20070631	US 2006-585032	20060629
PRAI WO 2004-EP12077	A	20040207		
OS MARPAT 143:216317	#	20041026		
GI				



AB The invention relates to the lightening cationic naphthalene dyestuffs of formula (I), and to dyes for keratin fibers, especially human hair, containing said compds. The compns. further contain natural or synthetic polymers, or modified natural polymers. Thus 4-[(6)-(1,3-dioxo-2,3-dihydro-1H-benzo[de]isoquinoline-6-yl)iminomethyl]-1-(2-hydroxyethyl)pyridinium bromide was synthesized in two steps starting from 4-amino-naphthalene-1,8-dicarboxylic acid and 4-pyridine carboxaldehyde. The product was included as a 2.5 mmol component in a

L13 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1999:602905 CAPLUS  
 DN 131:168834  
 TI Cationic dyes, their preparation, and hair preparations  
 containing such dyes  
 IN Braun, Hans-Juergen; Czizler, Thomas; Umbricht, Gisela;  
 Goettel, Otto; Kripp, Thomas-Christian  
 PA Wella A.-G., Germany  
 SO Ger. Offen., 24 pp.  
 CODEN: GWXKXK  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 19802940	A1	19990805	DE 1998-19802940	19980127
DE 19802940	C2	20000203		
PRAI DE 1998-19802940		19980127		
OS MARPAT 131:168834				

AB Nonoxidative hair dyes have the structure (R<sub>1</sub>COO)<sub>n</sub>Bz<sup>+</sup> zA<sup>-</sup>, where A is an anion, B is a group containing pos. charged N, P or S, especially a quaternized aromatic heterocycle (such as imidazolium), R is a chromophoric radical, X is O or NR<sub>1</sub> (R<sub>1</sub> = H, C1-6 alkyl), and Y is CH<sub>2</sub> or an (un)substituted C2-6 alkylene group. Thus, C.I. Disperse Red 15 was esterified with C1CH<sub>2</sub>COOCl, and the product was used to quaternize N-methylimidazole to produce a cationic dye. Hair was contacted with a solution of 2.5 mmol of the dye, 10.0 g EtOH, and 10.0 g 25% aqueous polyethylene glycol monostearyl ether in 100 g H<sub>2</sub>O for 20 min at 40°, rinsed, shampooed, rinsed and dried to show a Bordeaux red color with L\*a\*b\* values L = 28.5, a = 36.6, and b = 8.9, which withstood ≥10 washings.

L13 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 direct hair dye that further contained (g): ethanol 5; decylpolyglucose 4.0; EDTA disodium salt hydrate 0.2; water to 100.  
 RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L1 STRUCTURE UPLOADED

D

L2 STRUCTURE UPLOADED

D

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L4 55 SEA SSS FUL L1 OR L2

D QUE L4 STAT

L5 29 SEA ABB=ON PLU=ON L4 AND CAPLUS/LC

L6 26 SEA ABB=ON PLU=ON L4 NOT L5

D 1-26 IDE CAN

FILE 'CAPLUS' ENTERED AT 10:14:00 ON 11 AUG 2008

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RICHARD"/AU)

E GOTTEL OTTO/AU

L9 4 SEA ABB=ON PLU=ON "GOTTEL OTTO"/AU

E HAYOZ ANDRE/AU

L10 12 SEA ABB=ON PLU=ON "HAYOZ ANDRE"/AU

E BRAUN HANS/AU

L11 146 SEA ABB=ON PLU=ON "BRAUN HANS JUERGEN"/AU

L12 164 SEA ABB=ON PLU=ON L8 OR L9 OR L10 OR L11

L13 5 SEA ABB=ON PLU=ON L12 AND CATIONIC AND NAPHTH?

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FILE COVERS 1907 - 11 Aug 2008 VOL 149 ISS 7  
FILE LAST UPDATED: 10 Aug 2008 (20080810/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

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<http://www.cas.org/legal/infopolicy.html>

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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
137.26	468.43

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-19.20	-19.20

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